STORMWATER PROJECT SUMMARY SHEET

Project: Ben Brenman / Cameron Station Pond	**Address:** 4800 Brenman Park Drive

BACKGROUND INFORMATION

Cameron Station Pond was constructed as a stormwater management facility for the Cameron Station residential development in the late 1990s. Both the pond and the park are a popular amenity for the community and are widely used. The pond includes a trickling up flow filter and sediment forebay. The upflow filter is a low maintenance facility with aggregate media that has improved downstream water quality. The pond not only treats the runoff from the Cameron Station development but also additional runoff from Duke Street (north of the pond) by means of two low flow diversion manholes that send the "first flush" to the pond for treatment.

OPPORTUNITIES / BENEFITS

- The pond has enough treatment volume to treat additional runoff and other drainage areas can be rerouted toward the pond
- The forebay can be dredged to increase the treatment volume
- Additional water treatment features like aquatic benches and/or floating island wetlands can be added
- Maintenance requirements would not change significantly from current requirements
- The project seeks to provide improvements to existing amenities which could include;
  - Potential for new trail connection(s) across pond
  - Providing new landscape to geese and provide habitat for riparian birds and animals
  - Adding educational and ecological information around trail

OTHER CONSIDERATIONS

- The current forebay is undersized by 0.22 acres
- The park is heavily-used and use of green space for water quality improvements should be minimized
- An aggressive invasive aquatic plant called hydrilla thrives in the pond during warm weather. Current management practices include releasing triploid grass carp to contain the hydrilla.

IMPACTS

- Conversion of land to water (forebay) and associated costs
- Multiple cells in pond would result in different aesthetic
- Temporary construction related activities
  - Also includes storm sewer installation through Armistead Boothe Park

DESIGN CONCEPT

- ≈248 ac total drainage area (160 ac impervious)
  - ≈215 acres (136 ac impervious) existing regulated drainage area
  - ≈33 acres (23 ac impervious) from area west of Armistead Boothe Park via diversion pipe
- ≈0.22 ac = Enlargement of sediment forebay at current avg. depth of 4.9 feet
  - 0.39 ac = current size of sediment forebay
- Standard aquatic benches (min. 4' wide x 1' deep)
- Multiple cell design to increase flow path via earthen berm or concrete weir across pond
  - May install pedestrian bridge over berm / weir similar to existing bridge
- ≈0.11 ac = Cumulative area of floating wetlands (must be ≥ 10% of pond area)
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PROJECT COST INFORMATION (Percent of Total Pollutant Removal Target)

Estimated Cost	**Pollutant Reduction [lbs/yr]**			**Equivalent Acres Treated**	
Design & Construction	TN	TP	TSS	Ac Treated	Cost per Equiv. ac
≈$3.5M	500 (6%)	90 (9%)	31,000 (4%)	≈105	≈$33

Figure 1: Cameron Station Pond Concept

Figure 2: Cameron Station Pond Drainage Area